EXHIBIT 3

REBUTTAL EXPERT REPORT OF STEVEN P. COLE, Ph.D.

I.   INTRODUCTION

1.   My qualifications and compensation for work on this case have been presented in my previous report, "Preliminary Report of Steven P. Cole, Ph.D., *National Association for the Advancement of Colored People, et al. v. East Ramapo School District et al.* December 7, 2017." Plaintiffs' counsel requested that I provide a statement of my opinions and supplement my preliminary report concerning issues that arose during my deposition by Defendants' counsel on February 6, 2018 and that were raised by Defendants' expert Dr. John Alford in his report dated February 19, 2018.

II.   SUMMARY OF REBUTTAL

2.   My approach used multiple methods of analysis to take advantage of the most data available and to investigate the existence of racially-polarized voting in East Ramapo from the most angles possible. Each of the methods of analysis that I use has been well-accepted in social science research and by courts for the analysis of racially polarized voting. In fact, Professor Bernard Grofman, one of the leading experts in the legal analysis of racial bloc voting, recommends "making use of the full range of available techniques."[1]

3.   Dr. Alford's critique of my methodology ignores peer-reviewed research supporting the reliability and utility of each of my methods of analysis and the importance of using multiple methods of analysis. According to Abosch et al.,[2] "there is often no 'silver bullet' in

---

[1] Bernard Grofman, "A primer on racial bloc voting analysis," *The Real Y2K Problem: Census 2000 Data and Redistricting Technology*, ed. N. Persily. Brennan Center for Justice, New York University School of Law (2000).

[2] Yishaiya Abosch, Matt A. Barreto, and Nathan D. Woods, "An Assessment of Racially Polarized Voting For and Against Latino Candidates in California." 118, *Voting Rights Act Reauthorization of 2006*, ed. A. Henderson. University of California Press (2007).

analyses of polarization…" and analysts should examine voting patterns "through as many lenses as possible."[3]   They conclude, "if a consistent set of results shows up across the various methods employed here, then, in our view, the conclusions we derive become substantially more reliable than if we were to report the results of a single method in isolation."[4]   The methods Abosch et al. recommend are bivariate correlation, homogenous precinct analysis, Goodman's ecological regression, and King's ecological inference.[5]   I used King's ecological inference ("EI"), homogenous precinct analysis (HPA), and a correlation analysis derived from Goodman's ecological regression in my analysis of racially polarized voting in East Ramapo. I based my conclusions concerning the extent to which each election is characterized by racially-polarized voting on whether the results of all methods of analysis applied were consistent. Attempts to focus on just one method often ignore the larger patterns of the evidence.

4.   I used a different method of EI analysis from Dr. Alford. The method of EI that I used has long been accepted by the social science research field and the courts in analyzing racially polarized voting, and provides reliable data regarding Black and Latino voting patterns in this case. Dr. Alford's critique of my analysis ignores peer-reviewed research showing that both my method of EI and his method of EI have limitations, but both are probative in the analysis of racially-polarized voting. Indeed, both methods were developed, in part, by the same social scientist, Dr. Gary King at Harvard University.

5.   Dr. Alford's assertion that I "did not include any measures of reliability" with my EI analysis is misleading. At my deposition on February 6, I testified that I calculated standard

---

[3] *Id.*

[4] *Id.*

[5] *Id.* at 117-18.

errors for my EI estimates. On February 8, I produced to Defendants tables showing the standard

error calculations for each of my EI estimates for Board elections and the 2012 Presidential

election, as well as the raw output generated by the statistical analysis software that I used. Those

tables are included in this report as Rebuttal Tables 1 and 2. Dr. Alford claims to have reviewed

the data I produced after my deposition, but he appears to have ignored my standard error

calculations in doing so. For convenience, I have also converted my standard errors for each

estimate into confidence intervals, which are included in Rebuttal Tables 3 and 4. The standard

error data and confidence intervals generated for my estimates demonstrate that my EI estimates

are reliable and confirm my conclusion that voting in East Ramapo is racially-polarized.

6.   Dr. Alford's claim that fewer than 15 polling places produce unreliable EI analyses

is arbitrary and unsupported by any independent sources.

7.   Dr. Alford admits that his analysis provides no meaningful information regarding

Black and Latino voting patterns. Dr. Alford's one method of statistical analysis is consistent with

all three of my methods of statistical analysis in determining that the preferred candidate of a very

large White voting bloc has prevailed in every Board election analyzed.

8.   Dr. Alford's assertion that my "Homogenous Precinct Analysis cannot be used to

determine whether there is racially polarized voting in District elections" is misleading. The

analysis of racially-polarized voting requires discrete inquiries into white and minority patterns.

Even where there are no homogenous-minority precincts in Board elections, the availability of

homogenous-White precincts permits the analysis of white bloc voting, which constitutes half of

racially-polarized voting analysis. Furthermore, Dr. Alford ignores my analysis of data from the

2012 Presidential election, including an HPA that looks at both homogenous White and Black

3

precincts and shows that racially polarized voting in East Ramapo is not limited to school board elections.

9.   Dr. Alford's critique of my correlation analysis ignores that correlation coefficients (*r* values) demonstrating large effect sizes, that is, a strong relationship between the racial composition of polling places and support for a particular candidate, have been used in the analysis of racially-polarized voting, even in jurisdictions with few polling places.

10.   Dr. Alford ignores all of my analyses of racially polarized voting in the 2012 Presidential election, which offers a much richer data set than Board elections. My EI, HPA, and correlation analyses each demonstrate strong racially-polarized voting among the District electorate and is consistent with my findings of racially polarized voting in Board elections.

III.   USING MULTIPLE STATISTICAL METHODOLOGIES CHECKED AGAINST CONTEMPORANEOUS QUALITATIVE DATA IS A SOUND APPROACH TO RACIALLY-POLARIZED VOTING ANALYSIS

11.   I used three separate methods of statistical analysis each of which has been repeatedly accepted by federal courts for use in vote dilution cases: (i) EI, (ii) correlation analysis, and (iii) homogeneous precinct analysis (HPA).

12.   After performing statistical analyses, I gathered and analyzed contemporaneous demographic data on the composition of the East Ramapo student population and media reports about District elections to understand better the factual context in which the voting data were generated, and to assess the precision and accuracy of my quantitative analyses.

13.   Gary King, the author of EI, warned about making inferences about individual voting behavior from aggregate data alone:

> [T]here is no way to make certain inferences about individual level behavior from aggregate data alone. The only solution to this fundamental lack of information is to bring in some of the vast array of qualitative information available to most social scientists about the problems we study – including ethnographies, participant

4

observations, partial survey data, journalistic accounts, historical studies, prior quantitative research, and the like – the full range of data collection schemes used in modern social science. Interpreting qualitative information in the context of statistical inference is of course open to more interpretation and ambiguity than formal statistical tests, but stopping at quantitative data, especially for this problem, is insufficient."[6]

14.   Mixed-methods approach to research, that is, using quantitative and qualitative data that Dr. King recommends has become increasingly prevalent in recent years. A prevalent type of mixed methods research is a quantitatively driven approach in which the research study at its core is a quantitative study with qualitative data and information added to improve the quantitative study by providing deeper and fuller answers to the research question.[7] Such research produces a more complete picture by combining information from complementary kinds of data or sources. This form of methodological triangulation provides multiple perspectives to interpret the results of a study. Such use of multiple strategies to enhance validity of a study now is routinely advocated by methodologists.[8] In general, more data generate stronger conclusions.

15.   Dr. Alford's critique of my use of supplemental data is unsupported by any citation and ignores that mixed-method analysis, that is, the use of qualitative data as a check on quantitative analysis has gained wide-acceptance. Dr. Alford also ignores that I describe a simple and cogent methodology for gathering and reviewing supplemental data in my initial report and in my deposition: I looked at (1) government data regarding the racial composition of the District

[6] Gary King, *EI*: A Program for Ecological Inference, v. 1.9a, available at https://gking.harvard.edu/files/gking/files/ei_0.pdf(1995-2006).

[7] *See* Abbas Tashakkori and Charles Teddlie, "Mixed Methodology: Combining Qualitative and Quantitative Approaches," Sage Publications, (1998).

[8] *See* John W. Creswell, "Mapping the Field of Mixed Methods Research," Journal of Mixed Methods Research, (2009); Martyn Denscombe, "Communities of Practice: A Research Paradigm for the Mixed Methods Approach," Journal of Mixed Methods Research, (2008).

schools; (2) articles in newspapers designated by the Board as newspapers of record that mentioned

school board elections and the names of candidates; (3) the results of Google searches mentioning

the names of groups of school board candidates; and (4) the transcript of an NPR program that is

a popular reference to the District, which contains one of the very few (if not the only)

contemporaneous media reports on the uncontested 2014 elections. Moreover, I do not rely

exclusively on supplemental data to reach any conclusion regarding racially polarized voting.

Instead, I only use supplemental data, including government data regarding the racial composition

of District schools, to check the validity of my statistical analysis.

IV.   PEER-REVIEWED RESEARCH SHOWS KING'S ECOLOGICAL INFERENCE IS A RELIABLE METHOD OF ANALYZING RACIALLY-POLARIZED VOTING

16.   One of my methods of statistical analysis, King's EI, has become the benchmark

method courts use in evaluating racially polarized voting and has been widely used in comparative

politics research on group and ethnic voting patterns.[9] I used the traditional iterative EI model

analyzing each candidate and each racial group separately. This iterative method was employed

by Dr. Lisa Handley in *United States v. Port Chester*[10] and relied upon by the district court in that

case, as well as numerous other courts, in finding the existence of legally significant racially-

---

[9] Loren Collingwood, Kassra Oskooii, Sergio Garcia-Rios, and Matt Barreto, "eiCompare: Comparing Ecological Inference Estimates across EI and EI:R x C," The R Journal, vol. 8, at 93 (2016).

[10] *U.S. v. Village of Port Chester*, No. 06 Civ. 15173 (PGG), Dkt. No. 8-1 at 3 (S.D.N.Y.) (Ex. 1 to Decl. of Dr. Lisa Handley, "Voting Patterns by Ethnicity in Recent Elections in the Village of Port Chester, New York") (reporting use of "Ecological Inference, as developed by Professor Gary King, incorporat[ing] the method of bounds and maximum likelihood statistics estimates of voting patterns by race").

polarized voting.[11] I ran EI version 1.9, 2/8/2003; EzI version 2.7, 4/14/2003. EzI is a stand-alone, menu oriented version of EI that runs under Windows. Dr. Handley used EzI in the analysis of racially polarized voting that the district court relied upon in *United States v. Port Chester*.[12]

17.   Other approaches to EI analysis have developed alongside the approach that Dr. Handley and I have used. Rosen et al.[13] proposed a rows by columns (R x C) approach to analyze multiple candidates and/or multiple racial groups, but their Bayesian approach suffered computational difficulties.[14]

18.   Studies have compared King's EI estimates of racially-polarized voting to real election data and found that King's EI, using EzI, produces accurate and reliable estimates. Grofman and Barreto found that racially-polarized voting estimates from King's EI run with EzI software were accurate in reproducing true individual-level voting behavior based on exit poll data for Latino and non-Latino voters in Los Angeles.[15] Grofman and Barreto compare across six different potential methods for EI and conclude that when implemented accurately, King's EI with

---

[11] *U.S. v. Village of Port Chester*, 704 F. Supp. 2d 411, 441 (S.D.N.Y. 2010) ("The methods employed by Dr. Handley to reach these conclusions have been accepted by numerous courts in voting rights cases").

[12] *U.S. v. Village of Port Chester*, No. 06 Civ. 15173 (PGG), 2007 WL 707877 (S.D.N.Y. Jan. 17, 2007) (Deposition of Dr. Lisa Handley) ("I used what's called EZI, a software program developed by Gary King.")

[13] Ori Rosen, Wenxin Jiang, Gary King, and Martin A. Tanner, "Bayesian and frequentist inference for ecological inference: The *R x C* Case," Statistica Neerlandica, Vol. 55, nr. 2 (2001).

[14] Collingwood et al., "eiCompare: Comparing Ecological Inference Estimates across EI and EI:R x C," *supra* note 9 at 93.

[15] Bernard Grofman and Matt A. Barreto, "A Reply to Zax's (2002) Critique of Grofman and Migalski (1988) *Double-Equation Approaches to Ecological Inference When the Independent Variable Is Misspecified*," Sociological Methods & Research, vol. 37, no. 4, 599 (2009).

EzI produces accurate estimates.[16] They further explain, "we have examined hundreds of contests and found that differences across methods tend to be minor when looking at African American voting patterns, and also minor for Hispanic voting patterns."[17] Dr. Alford ignores this research.

      19.   Collingwood et al. compared racially-polarized voting estimates from iterative EI and simultaneous R x C approaches with their recently developed software package, eiCompare.[18] They compared polarized voting estimates from EI and R x C for a city council election in Corona, California, and found that King's original EI and the R x C methods produced nearly identical results, and that EI was just as reliable as R x C.[19] Further, they analyzed a two-candidate mayoral election with Asian, Black, Latino, and White voters for which there were individual-level exit poll data reported by the Los Angeles Times.[20] The authors demonstrated that, in general, the EI and R x C approaches produced "remarkably consistent results" that closely matched the exit poll results.[21] But Collingwood et al. also noted that R x C has limitations: "While R x C has been touted as the method necessary in situations with multiple groups and multiple candidates, *the results do not always demonstrate face validity*."[22] The authors conclude that "analysts may want to incorporate original EI methods."[23]

---

[16] *Id.* at 608.

[17] *Id.* at 608.

[18] Collingwood et al., "eiCompare: Comparing Ecological Inference Estimates across EI and EI:R x C," *supra* note 9.

[19] *Id.* at 96.

[20] *Id.* at 99.

[21] *Id.*

[22] *Id.* (emphasis added).

[23] *Id.*

20.   In a more recent paper, Barreto et al. compared and contrasted King's EI to the

R x C method across 14 elections featuring 78 candidates and concluded that across all of our

analyses, "[w]e find that both methods produce similar results pointing to the presence of racially

polarized voting."[24] This suggests that iterative EI and R x C can be used interchangeably when

assessing precinct level voting patterns in Voting Rights Act cases.[25] Dr. Alford ignores this

research.

21.   The upshot is that both my iterative 2 x 2 approach and Dr. Alford's R x C approach

have limitations, but both have probative value where they yield results with sufficiently small

standard errors or narrow confidence intervals to ensure their reliability.[26]

22.   Dr. Alford opines that the "iterative '2 x 2' model is flawed and does not produce

accurate or reliable estimates when used, as it was here, to produce iterative R x C estimates …."[27]

Contrary to Alford's claims, as I described above, when iterative EI was compared to R x C for a

two-candidate mayoral election with Asian, Black, Latino, and White voters, it was demonstrated

that the EI and R x C approaches produced "remarkably consistent results" that closely matched

exit poll results.[28] Dr. Alford also claims that my EI results are unreliable because I was unable to

generate estimates for two quantities of interest, percent of Latino voters supporting Alan Keith

---

[24] Matt A. Barreto, Loren Collingwood, Sergio Garcia-Rios, and Kassra Oskooii. 2017. "Estimating candidate support: Comparing iterative EI & EI-R x C Methods" 2, presented at the UCLA Race, Ethnicity, Immigration Lab Workshop (2017), available at http://www.collingwoodresearch.com/uploads/8/3/6/0/8360930/mpsa_draft.pdf.

[25] *See id.* at 15.

[26] *Id.*

[27] Alford Report ¶ 30.

[28] Collingwood et al., "Estimating candidate support: Comparing iterative EI & EI-R x C Methods" *supra* note 24, at 19.

Jones for the seat of Jacob Lefkowitz in the 2015 District election and the percent of Latino voters supporting Yisroel Eisenbach for the seat of Eliahu Solomon in the May 2015 election.[29]

23.   Dr. Alford, however, neglects to mention that these two contests were the only three-candidate contests analyzed and Jones received only 468 out of 11,448 votes cast (4.1%) while Eisenbach received only 556 out of 11,464 votes cast (4.9%). These were by far the smallest vote totals for any candidate of any District contest from 2013 to 2017. As I indicated in my deposition, with Latino percent CVAP the smallest racial category and so few votes cast for these two candidates, EI was not able to generate an estimate. These two results are indicative of the extremely low vote totals for these two candidates and not dispositive of overall EI unreliability.

V.   **STANDARD ERROR DATA GENERATED IN MY ECOLOGICAL INFERENCE ANALYSIS AND PRODUCED TO THE DISTRICT ON FEBRUARY 8 DEMONSTRATES THE RELIABILITY OF MY ANALYSIS**

24.   In the course of my EI analysis, I generated standard errors for all of my estimates that confirmed the reliability of my calculations. As I indicated in my deposition, standard errors are generated as part of King's standard statistical output. My preliminary report EI estimates with standard errors are included here as Table 1 for School Board contests and as Table 2 for the 2012 general election for U.S. President.

25.   A standard error here is an index of how much an EI point estimate of racially-polarized voting varies from the "true" racially-polarized voting value. The smaller the standard error, the smaller is the error likely to arise in the estimation. The standard errors can be used to

---

[29] Alford Report ¶ 31.

generate approximate confidence intervals for district-level estimates of racially-polarized voting.[30]

26.   I have also generated confidence intervals (CI) for my estimates. A CI refers to the amount of uncertainty associated with an estimate. A 95% CI would indicate that one is 95% confident that the interval contains the "true" racially-polarized voting estimate. A 90% CI would indicate that one is 90% confident that the interval contains the "true" racially-polarized voting estimate. An 80% CI would indicate that one is 80% confident that the interval contains the "true" racially-polarized voting estimate, and so on. My preliminary report EI estimates with 95% CI are included here as Table 3 for School Board contests and as Table 4 for the 2012 general election for U.S. President. For the 2015 contest for the seat of Yonah Rothman, I have also included my EI estimate for the Black vote at an 80% CI.

27.   My EI analysis shows that within a 95% CI, Black and Latino voters have been politically cohesive and their preferred candidates defeated by a cohesive White voting bloc in eight out of the last nine contested elections for seats on the Board. The remaining election, the 2015 contest for the seat of Yonah Rothman, showed cohesive Latino voting within a 95% CI. In this remaining election, my analysis also shows that within an 80% CI, Black voters were politically cohesive and preferred the same candidate as Latino voters. Finally, the preferred candidate of that cohesive coalition of Black and Latino voters was defeated by the preferred candidate of large White voting bloc.

---

[30] Gary King, A Solution to the Ecological Inference Problem, Princeton, NJ: Princeton University Press (1997).

28.   My EI output with standard errors was provided to Defendants' counsel on February 8.[31] I also generated versions of Tables 2 and 4 from my initial report that included EI estimates with those standard errors, which also were provided to defendants' counsel for their convenience on February 8.[32] Those tables are included as Tables 1 and 2 to this report.

29.   Dr. Alford's assertion that I did not include any "measures of reliability" with my EI calculations is misleading. Dr. Alford claims that he reviewed the materials that I produced to the District's counsel after my deposition, which included the standard error calculations that were generated in the course of my EI analysis and a table pairing those calculations with my estimates. Given that Dr. Alford himself has used standard error calculations as a measure of reliability in his analysis of racially polarized voting in other vote dilution cases,[33] it is puzzling that he claims that I "did not include any measurements of reliability with [my] estimates." I did so conspicuously in the table I produced on February 8, and I do so again in this report.

30.   Moreover, to the extent Dr. Alford's critique is based on the fact I reported standard errors rather than confidence intervals for my EI estimates, that critique is also misleading. Converting standard errors into approximate CI is straightforward.[34]

31.   For convenience, I calculated CI from my standard errors and they are presented in Tables 3 and 4. My EI analysis shows that within a 95% CI, Black and Latino voters have been politically cohesive and their preferred candidates defeated by a cohesive White voting bloc in

---

[31] *See* Butler Decl. Ex. 10, Dkt. No. 79-10.

[32] *Id.* at 5-6.

[33] *Cisneros v. Pasadena Indep. Sch. Dist.*, No. 4:12 Civ. 2576 (KPE), 2014 WL 1668500, at *13 (S.D. Tex. Apr. 25, 2014) (producing Dr. Alford's point estimates with standard errors)

[34] *See* Federal Judicial Ctr., Reference Manual on Scientific Evid. (3d ed.), at 245-46 (2011) (basic explanation of conversion of standard errors into confidence intervals).

eight out of the last nine contested elections for seats on the Board. For the remaining election,

the 2015 contest for the seat of Yonah Rothman, showed cohesive Latino voting within a 95% CI.

In this remaining election, my analysis also shows that within an 80% CI, Black voters were

politically cohesive and preferred the same candidate as Latino voters. Finally, the preferred

candidate of that cohesive coalition of Black and Latino voters was defeated by the preferred

candidate of large White voting bloc.

VI.   DR. ALFORD PROVIDES NO SUPPORT FOR HIS ARBITRARY CLAIM THAT ECOLOGICAL INFERENCE IS UNRELIABLE WHEN ANALYZING FEWER THAN 15 POLLING PLACES

32.   Dr. Alford's critique that the number of polling places prevents the reliable

determination of the existence of racially-polarized voting in East Ramapo—or any jurisdiction

with fewer than 15 polling places—has no merit.

33.   Dr. Alford wrote that my EI analysis:

> [D]oes not acknowledge or address the low number of precincts involved in the District elections. There are only ten election precincts used in District elections, well below the number of precincts normally used in EI analyses. This problem would likely be compounded by the relatively low number of voters in each precinct ….[35]

34.   Dr. Alford provides no authority for his implication that an assessment of racially-

polarized for East Ramapo is somehow prohibited by the fact that District elections use 10 polling

places. Moreover, his criticism that I "do[] not acknowledge" the number of polling places in East

Ramapo makes no sense. The number of polling places for District elections is entirely self-

evident in Table 1 of my initial report, where I include the racial composition of the citizen voting

age population for each polling place.

---

[35] Alford Report ¶ 26.

13

35.   Going further, Dr. Alford asserts that "it is my experience that EI analysis tends to produce unreliable estimates when there are fewer than 15 precincts." For point of reference, school board elections in New Rochelle,[36] Mount Vernon,[37] and Schenectady[38]—the seventh, eighth, and ninth largest cities in New York State, respectively[39]—all use fewer than 15 precincts. This assertion, which is not supported by any authority of research, does not appear to be based on any empirical analysis comparing estimates for 10-precinct cases versus 20-precinct cases, versus 30-precinct cases and so on. Dr. Alford's assertion suggests that voters in jurisdictions with a smaller number of polling places are less entitled to relief from vote dilution as voters in jurisdictions with a larger number of polling places.

36.   With respect to number of voters in each polling place, Dr. Alford presents no authority or normative data for his statement that there were a "relatively low number of voters in each precinct."[40] The overall number of voters per polling place in the District does not preclude a reliable EI analysis. For example, the total number of voters in the 2017 District contest for the seat of Moshe Hopstein was 14,122. The number of voters per polling place ranged from 723 to

---

[36] City School District of New Rochelle, Polling Places, http://www.nred.org/polling_places (last visited March 13, 2018) (listing 13 polling places for school district elections).

[37] Mount Vernon City School District, Supplemental Bond Vote 2017, https://www.mtvernoncsd.org/Page/5959 (last visited March 13, 2018) ("Please note that all eleven polling sites will be used for the MVCSD Annual School Board/Budget Vote Election to be held May 16, 2017.")

[38] Zachary Matson, *Fewer Polling Places for Schenectady School Elections*, The Daily Gazette, May 14, 2016 https://dailygazette.com/article/2016/05/14/0514_side (last visited March 13, 2018) (noting reduction of polling places in Schenectady City School District elections from 12 polling locations to 7 polling locations).

[39] World Population Review, Population of Cities in New York (2018), http://worldpopulationreview.com/states/new-york-population/cities/ (last visited Mar. 14, 2018)

[40] Alford Report ¶ 26.

2,522, with a mean of 1,412 voters. In my experience, this magnitude of voters split between two

or three serious candidates does not preclude a reliable EI analysis.

37.   Dr. Alford's report also makes no mention of the fact that I augmented analysis of

school district contests with the 2012 general election for U.S. President that included 73 polling

places totally within the boundaries of East Ramapo, included 24,486 voters, and represented 82.2

of the total CVAP for the District.

VI.   DR. ALFORD'S ANALYSIS ONLY DEMONSTRATES THAT THE PREFERRED CANDIDATES OF A LARGE WHITE BLOC VOTING WIN EVERY BOARD ELECTION IN EAST RAMAPO

38.   Determining the existence of racially-polarized voting requires two constituent

inquiries—(a) whether minorities in the jurisdiction are politically cohesive; and (b) whether there

is cohesive white bloc voting such that the preferred candidates of minorities are usually

defeated.[41]

39.   Dr. Alford claims that it is impossible to determine whether and to what extent

minorities voters are cohesive in East Ramapo because there are too few polling places and because

minority turnout is too low.[42] Dr. Alford's one method of analysis is consistent with all of my

methods of analysis in demonstrating that are very high levels of white voter cohesion in Board

elections in East Ramapo and that white-preferred candidates have won every contest analyzed.[43]

40.   Dr. Alford's analysis also shows large and increasing white voter cohesion in East

Ramapo.[44] In each election, all of the winning candidates received approximately the same level

---

[41] *Thornburg v. Gingles*, 478 U.S. 30, 31 (1986).

[42] Alford Report ¶¶ 46-50.

[43] Alford Report ¶ 42 (table of results).

[44] Alford Report ¶ 42 (table of results).

of white voter support, with the average percentage of white voter support increasing from 81% in

2013 to 86% in 2017.

41.   My EI analysis yields more conservative estimates of white voter support, but is

consistent with Dr. Alford's analysis that white voter cohesion is increasing and that the preferred

candidates of the white voting bloc have won every election analyzed. Rebuttal Table 3.

42.   Dr. Alford's failure to generate any meaningful analysis regarding Black or Latino

voting patterns in East Ramapo highlights the importance of following the generally accepted

practice of using as many analytical methods as possible in evaluating racially-polarized voting.

Dr. Alford effectively asserts that investigation into the existence of racially polarized voting

should end if his one preferred method of EI yields standard errors too large or confidence intervals

too wide.[45] This is not well-accepted practice in this field, where analysts generally rely on as

many measures as possible to triangulate voting patterns. I have followed that generally accepted

practice.

VII.   DR. ALFORD'S ASSERTION THAT MY HPA "CANNOT BE USED TO DETERMINE WHETHER THERE IS RACIALLY POLARIZED VOTING IN DISTRICT ELECTIONS" IS MISLEADING

43.   Dr. Alford's estimates of white voter cohesion also undermine his critique that my

"use of Homogenous Precinct Analysis cannot be used to determine whether there is racially

polarized voting in District elections."[46] Even where data are only available for homogenous

White precincts, those data can be used to determine the extent to which Whites vote as a cohesive

bloc and whether their preferred candidates usually prevail. Thus, HPA provides substantial data

that can be used in combination with other data to determine the existence of racial bloc voting in

---

[45] Alford Report ¶ 50.

[46] Alford Report ¶ 13.

District elections. Dr. Alford's claim that HPA may not be reflective of how whites vote across East Ramapo, which he bases on unsourced assertions regarding "members of the Orthodox and Hasidic communities,"[47] ignores that homogenous precincts in East Ramapo reflect approximately 40% of the District's White CVAP,[48] and that my HPA calculations are closely aligned with his own estimations of White bloc voting across the District than my EI calculations.[49]

44.   Dr. Alford also ignores that I do use HPA to examine both the White and minority portions of the racially-polarized voting inquiry within the context of the 2012 Presidential election. The 2012 Presidential election offers data from a total of 73 precincts and includes both homogenous Black and White precincts. The HPA from the 2012 Presidential election, an interracial contest, demonstrates that White and Black voters in East Ramapo exhibit strong racially-polarized voting behaviors, even outside the context of school board elections. Although exogenous elections are afforded less weight than endogenous elections, the 2012 Presidential election is probative of the existence of racially polarized voting among voters in the District generally, which informs and is consistent with my conclusion that there is racially-polarized voting among those voters in elections for District offices, i.e., Board elections.

VIII. DR. ALFORD CRITIQUES OF MY CORRELATION ANALYSIS MISREAD MY REPORT AND MY SOURCES

45.   Dr. Alford's attempt to criticize my correlation analysis by distinguishing it from a complete analysis of racially polarized voting using Goodman single-regression analysis is

---

[47] Alford Report ¶ 59,

[48] Cole Initial Report Table 1.

[49] *Compare* Alford Report ¶ 42 table (estimating white voter support for winning candidates at 86%-87%) *with* Cole Rebuttal Table 3 (using HPA to estimate white voter support for winning candidates at 89% and using EI to estimate white voter support for winning candidates at 77%-78%).

unfounded. My correlation analysis and a Goodman single regression use the same data inputs:

racial composition of each polling place and percent of total vote for a candidate for each polling

place. I did not, and did not claim in my initial report, to use single regression estimates of racially

polarized voting. Rather, I used the correlation coefficient ("r") to measure the strength of the

relationship between race of voters and vote outcome. A high r value demonstrates that race is

tightly associated with voting behavior, which is an indication of racially polarized voting.

46.   Dr. Alford's critique of my correlation analysis is also based on a misreading of Dr.

Loewen and Dr. Grofman's critique of Goodman's single-equation regression. Drs. Loewen and

Grofman propose a double-regression technique as an improvement over single regression for

estimating racially-polarized voting. [50] However, they still consider correlation coefficients as an

important part of voting analysis and prefer the correlation from a single regression to measure the

strength of the relationship between race of voters and outcome.[51] Furthermore, Dr. Alford's

critique of my reliance upon correlation coefficients (r values) with large effect sizes when their

level of statistical significance exceeds 0.05 is unsupported by any citation. He also fails to grapple

with my citation on this point to the work of Dr. Grofman,[52] one of the foremost experts in this

field, that values of $r \geq .50$ are considered evidence of significant racial polarization. Courts have

also found high r values probative of racially-polarized voting even where the number of polling

---

[50] James W. Loewen and Bernard Grofman, "Recent Developments in Methods Used in Voting Rights Litigation," Urban Lawyer (1989), at 596.

[51] *Id.*

[52] Cole Initial Report ¶ 28 (Bernard Grofman, Michael Migalski, and Nicholas Noviello, "The 'Totality of the Circumstances Test' in Section 2 of the 1982 Extension of the Voting Rights Act: A Social Science Perspective," Law & Policy (1985)).

places is as small as four, overall turnout is substantially lower than in East Ramapo, and there is

low variation in the racial composition of polling places.[53]

IX.   DR. ALFORD IGNORES MY ANALYSIS OF RACIALLY-POLARIZED VOTING IN THE 2012 PRESIDENTIAL ELECTION, WHICH SHOWS STRONG RACIAL POLARIZATION AMONG VOTERS IN EAST RAMAPO

47.   Dr. Alford ignores my analysis of racially polarized voting in the 2012 Presidential

election, which demonstrates strong racially-polarized voting among the District's electorate. The

2012 Presidential election data, which involves 73 polling places, contains none of the limitations

that Dr. Alford identifies with the data for District elections. Dr. Alford fails to acknowledge that

my EI, HPA, and correlation analyses for the 2012 election data all are consistent with my analyses

for racial voting patterns in District elections and buttress my conclusions.

VII.   CONCLUSIONS

48.   The overall conclusions for this rebuttal report are the same as those for my

preliminary report.

49.   There is a politically cohesive coalition of Black and Latino voters in East Ramapo.

In all nine of the most recent Board contests, large majorities of Black and Latino voters have

preferred the same candidates for office. In eight out of those nine contests, very large majorities

of both Black and Latino voters have preferred the same candidates for office. For those eight

contests, analyses indicated that within a 95% CI, Black and Latino voters were politically

cohesive. For the remaining contest, over 60% of Black voters and over 90% Latino voters

preferred the same candidate. For this contest, analyses indicated that within a 95% CI, Latino

---

[53] *Perez v. Pasadena Indep. Sch. Dist.*, 958 F. Supp. 1196, 1205 (S.D. Tex. 1997) ("There are only four polling places in the PISD for Board elections."); *id.* (percentage of Hispanic voting age population in each polling places ranges from 15.36% to 35.33%); *id.* at 1216-18 (total turnout for school board elections ranged from 792 votes to 6421 votes over 10-year period).

voters were politically cohesive and within an 80% CI, Black voters were politically cohesive. My

conclusion that there is Black and Latino political cohesion in all nine of these contests is supported

by the results of my correlation analysis, which shows that support for one set candidates increased

as the percentage of Black and Latino voters in a polling place increased. My conclusion that

Black and Latino voters in East Ramapo are politically cohesive is also supported by my EI

analysis, HPA, and correlation analysis for the 2012 Presidential election, which shows that very

large majorities of both Black and Latino voters supported Barack Obama and that support for

Obama increased as the percentage of Black and Latino voters in a polling place increased. This

conclusion is further supported by my review of qualitative data, including data from the New

York State Department of Education on the racial composition of East Ramapo schools, which

demonstrates that the District's public schools are 90% Black and Latino, and 96% non-White

overall, and the District's private schools are approximately 99% White, as well as

contemporaneous media reports, which show that one set of candidate was backed by advocates

for public schools and the other set of candidates was backed by advocates for private schools.

50.   Voting in East Ramapo is racially-polarized, such that Black voters and/or a

coalition of Black and Latino voters support the same candidates and those candidates are usually

defeated by the preferred candidates of White voters, who also vote as a bloc. In all twelve Board

contests that I analyzed, my EI analysis and my HPA showed that the preferred candidates of a

very large bloc of White voters won election. In all nine of the most recent Board contests, my EI

analysis shows large majorities of Black and Latino voters have preferred the same candidates for

office and those candidates have been defeated by the preferred candidates of a very large White

voting bloc. In eight out of those nine contests, analyses indicated that within a 95% CI, Black

and Latino voters were politically cohesive and their candidates of choice were defeated by the

preferred candidates of a very large White voting bloc. For the remaining contest, analyses indicated that within a 95% CI, Latino voters were politically cohesive and within an 80% CI, Black voters were politically cohesive. In this remaining contest, the preferred candidate of a cohesive coalition of Black and Latino voters was defeated by the preferred candidate of a very large White voting bloc.

51.   My conclusion that the preferred candidate of Black and Latino voters was defeated by the preferred candidate of a large White voting bloc in all nine of these contests is supported by the results of my correlation analysis, which shows that support for one set candidates increased as the percentage of Black and Latino voters in a polling place increased and for that same set of candidates, support decreased as the percentage of White voters increased. For the other set of candidates, my correlation analysis shows that support for those candidates decreased as the percentage of minority voters in a polling place increased and that their support increased as the percentage of White voters in a polling place increased.

52.   My conclusion that voting has been racially polarized in all nine of the most recent Board contests is further supported by my review of qualitative data, including data from the New York State Department of Education on the racial composition of East Ramapo schools, which demonstrates that the District's public schools are 90% Black and Latino, and 96% non-White overall, and the District's private schools are approximately 99% White, as well as contemporaneous media reports, which show that one set of candidate was backed by advocates for public schools and the other set of candidates was backed by advocates for private schools.

53.   My conclusion that voting in East Ramapo is racially polarized is also supported by my EI analysis, HPA, and correlation analysis of the 2012 Presidential election. My analyses of the 2012 Presidential election shows very that that very large majorities of both Black and Latino

voters supported Barack Obama and that support for Obama increased as the percentage of Black and Latino voters in a polling place increased. My analyses also show that a large majority of White voters supported Mitt Romney and that support for Romney decrease as the percentage of Black and Latino voters in a polling place increased and that support for Romney increased as the percentage of White voters in a polling place increased.

# # #

I reserve the right to continue to supplement my report in light of additional facts, testimony and/or materials that may come to light.

Pursuant to 28 U.S.C. § 1746, I declare under penalty of perjury of the laws of the United States that the foregoing is true and correct according to the best of my knowledge, information and belief.

Executed on March 14, 2018

Steven P. Cole

STEVEN P. COLE

Table 1

East Ramapo Board of Education

Member Elections 2013-2017

Ecological Inference Results with Standard Errors and Homogeneous Precinct Analyses

Seat/Candidates	% Latino Voters Voting for Candidate EI	% NH Black Voters Voting for Candidate EI	% NH White Voters Voting for Candidate		Votes
			EI	HPA	
May 16, 2017					
Seat of Moshe Hopstein					
Mark Berkowitz (W)	0.5 (0.2)	36.5 (5.3)	77.4 (0.9)	91.0	9,158
Alexandra K. Manigo (W)	99.5 (0.2)	68.8 (7.8)	23.5 (1.6)	9.0	4,964
Seat of Harry Grossman					
Harry Grossman (W)	0.4 (0.2)	7.6 (5.4)	77.7 (0.9)	90.6	9,137
Eric Goodwin (B)	99.4 (0.2)	94.2 (6.3)	22.5 (1.4)	9.4	4,910
Seat of Vacant /Engel/Chajmovicz					
Joel Freilich (W)	0.5 (0.2)	3.4 (0.4)	79.0 (0.9)	91.1	9,530
Chevon Dos Reis (L)	99.8 (0.1)	99.4 (0.2)	20.8 (0.9)	8.9	4,503

Notes:
Standard errors in parentheses.

School District CVAP
Latino   =   9.4%
NH Black   =   24.1%
NH White   =   60.5%

Abbreviations:
CVAP: Citizen Voting Age Population
NH: Non-Hispanic
W: White
B: Black
L: Latino/a
EI: King's Ecological Inference Analysis
HPA: Homogeneous Precinct Analysis For %NH White, polling places with > 90% NH White CVAP

24

Table 1 (cont.)

East Ramapo Board of Education

Member Elections 2013-2017

Ecological Inference Results with Standard Errors and Homogeneous Precinct Analyses

Seat/Candidates	% Latino Voters Voting for Candidate EI	% NH Black Voters Voting for Candidate EI	% NH White Voters Voting for Candidate		Votes
			EI	HPA	
May 17, 2016					
Seat of Bernard L. Charles Jr.					
Bernard L. Charles, Jr. (B)	1.2 (0.4)	1.4 (0.6)	77.2(0.9)	89.8	7,973
Kim A. Foskew (W)	99.1 (0.4)	99.6 (0.1)	23.0 (1.1)	10.2	3,972
Seat of Pierre Germain					
Pierre Germain (B)	0.4 (0.1)	0.9 (0.5)	77.0 (0.7)	89.3	7,860
Jean E. Fields (B)	99.5 (0.2)	99.2 (0.4)	23.4 (1.0)	10.7	4,137
Seat of Yehuda Weissmandl					
Yehuda Weissmandl (W)	0.5 (0.1)	0.6 (0.2)	78.0 (0.3)	89.2	7,626
Natashia E. Morales (L)	99.2 (0.3)	99.2 (0.3)	24.4 (1.1)	10.8	4,401
Seat of Sabrina Charles-Pierre					
Sabrina Charles-Pierre					5,014
Unopposed					
May 19, 2015					
Seat of Jacob Lefkowitz					
Jacob L. Lefkowitz (W)	0.7 (0.2)	36.2 (3.3)	75.0 (1.7)	86.2	6,380
Sabrina Charles-Pierre (B)	64.2 (0.5)	74.6 (6.8)	23.5 (0.9)	11.2	4,600
Alan Keith Jones (B)	*	3.6 (2.0)	2.6 (0.4)	2.6	468
Seat of Yonah Rothman					
Yonah Rothman (W)	0.5 (0.2)	40.0 (7.2)	72.1 (2.4)	86.9	6,523
Natasha Morales (L)	99.4 (0.2)	59.9 (5.6)	28.1 (2.1)	13.1	4,864
Seat of Eliahu Solomon					
Juan Pablo Ramirez (L)	0.3 (0.1)	26.5 (5.2)	68.0 (2.6)	79.0	6,293
Steve D. White (W)	99.4 (0.2)	69.7 (5.7)	25.2 (1.8)	11.8	4,615
Yisroel Eisenbach (W)	*	5.0 (1.1)	6.0 (0.4)	9.2	556

Notes: *Indeterminate

25

Table 1 (cont.)

East Ramapo Board of Education

Member Elections 2013-2017

Ecological Inference Results with Standard Errors and Homogeneous Precinct Analyses

Seat/Candidates	% Latino Voters Voting for Candidate EI	% NH Black Voters Voting for Candidate EI	% NH White Voters Voting for Candidate		Votes
			EI	HPA	
May 20, 2014					
<u>Seat of Moshe Hopstein</u>					
Moshe Hopstein					2,388
Unopposed					
Seat of David Wanounou					
(Daniel Schwartz)					
Harry Grossman (W)					2,652
Unopposed					
<u>Seat of Yehuda Weissmandl</u>					
Yakov Engel (W)					2,381
Unopposed					
Seat of Harry Grossman					
(MaraLuz Corado)					
Yehudat Weissmandl (W)					2,379
Unopposed					
May 21, 2013					
<u>Seat of Moses Friedman</u>					
MaraLuz Corado (L)	0.5 (0.2)	73.9 (4.7)	69.2 (2.7)	84.9	6,806
Margaret Tuck (B)	99.6 (0.2)	29.3 (5.8)	30.5 (2.8)	15.1	5,244
<u>Seat of Nathan Losman</u>					
Pierre Germain (B)	0.4 (0.2)	91.8 (7.9)	69.0 (2.3)	86.0	6,899
Eustache Clerveaux (B	99.5 (0.2)	7.6 (7.6)	30.2 (3.0)	14.0	5,085
Seat of Bernard L. Charles, Jr.					
Bernard L. Charles, Jr. (B)	0.6 (0.2)	89.7 (6.0)	68.7 (2.1)	85.2	6,833
Robert Forrest (B)	99.4 (0.2)	10.6 (6.3)	31.6 (2.6)	14.8	5,175

Table 2

East Ramapo School District Voters[1]

2012 U.S. Presidential General Election

Ecological Inference Results with Standard Errors and Homogeneous Precinct Analyses

Seat/Candidates	% Latino Voters Voting for Candidate[2]	% NH Black Voters Voting for Candidate		% NH White Voters Voting for Candidate		
	EI	EI	HPA	EI	HPA	Votes
November 6, 2012						
U.S. President						
Barack Obama (AA)	76.0 (3.1)	93.0 (1.1)	97.2	27.5 (0.8)	13.3	13,806
Mitt Romney (W)	24.1 (6.0)	6.2 (1.1)	2.6	71.3 (0.8)	86.0	10,680

[1] Election districts totally within East Ramapo School District boundaries.

[2] Estimates based on total of all Presidential candidates.

Notes:
Standard errors in parentheses.

EI: King's Ecological Inference Analysis
HPA: Homogeneous Precinct Analysis
Example, for %NH White, polling places with $\geq$ 90% NH White CVAP

Table 3

East Ramapo Board of Education

Member Elections 2013-2017

Ecological Inference Results with Confidence Intervals and Homogeneous Precinct Analyses

Seat/Candidates	% Latino Voters Voting for Candidate EI	% NH Black Voters Voting for Candidate EI	% NH White Voters Voting for Candidate EI	HPA	Votes
May 16, 2017					
Seat of Moshe Hopstein					
Mark Berkowitz (W)	0.5 (>0,1)	36.5 (25,48)	77.4 (75,79)	91.0	9,158
Alexandra K. Manigo (W)	99.5 (99,<100)	68.8 (51,86)	23.5 (20,27)	9.0	4,964
Seat of Harry Grossman					
Harry Grossman (W)	0.4 (>0,1)	7.6 (>0,20)	77.7 (76,80)	90.6	9,137
Eric Goodwin (B)	99.4 (99,<100)	94.2 (80,<100)	22.5 (19,26)	9.4	4,910
Seat of Vacant /Engel/Chajmovicz					
Joel Freilich (W)	0.5 (>0,1)	3.4 (>0,12)	79.0 (77,81)	91.1	9,530
Chevon Dos Reis (L)	99.8 (99,<100)	99.4 (99,<100)	20.8 (19,23)	8.9	4,503

Notes:
95% confidence intervals in parentheses.

School District CVAP
Latino   =   9.4%
NH Black   =   24.1%
NH White   =   60.5%

Abbreviations:
CVAP: Citizen Voting Age Population
NH: Non-Hispanic
W: White
B: Black
L: Latino/a
EI: King's Ecological Inference Analysis
HPA: Homogeneous Precinct Analysis For %NH White, polling places with > 90% NH White CVAP

28

Table 3 (cont.)

East Ramapo Board of Education

Member Elections 2013-2017

Ecological Inference with Confidence Intervals and Homogeneous Precinct Analyses

Seat/Candidates	% Latino Voters Voting for Candidate EI	% NH Black Voters Voting for Candidate EI	% NH White Voters Voting for Candidate		Votes
			EI	HPA	
May 17, 2016					
Seat of Bernard L. Charles Jr.					
Bernard L. Charles, Jr. (B)	1.2 (>0,2)	1.4 (>0,3)	77.2(75,79)	89.8	7,973
Kim A. Foskew (W)	99.1 (98,<100)	99.6 (99,<100)	23.0 (21,25)	10.2	3,972
Seat of Pierre Germain					
Pierre Germain (B)	0.4 (>0,1)	0.9 (>0,2)	77.0 (75,79)	89.3	7,860
Jean E. Fields (B)	99.5 (99,<100)	99.2 (98,<100)	23.4 (21,26)	10.7	4,137
Seat of Yehuda Weissmandl					
Yehuda Weissmandl (W)	0.5 (>0,1)	0.6 (>0,1)	78.0 (77,79)	89.2	7,626
Natashia E. Morales (L)	99.2 (99,<100)	99.2 (99,<100)	24.4 (22,27)	10.8	4,401
Seat of Sabrina Charles-Pierre					
Sabrina Charles-Pierre Unopposed					5,014
May 19, 2015					
Seat of Jacob Lefkowitz					
Jacob L. Lefkowitz (W)	0.7 (>0,1)	36.2 (29,44)	75.0 (71,79)	86.2	6,380
Sabrina Charles-Pierre (B)	64.2 (63,65)	74.6 (59,90)	23.5 (21,26)	11.2	4,600
Alan Keith Jones (B)	*	3.6 (>0,8)	2.6 (2,4)	2.6	468
Seat of Yonah Rothman					
Yonah Rothman (W)	0.5 (>0,1)	40.0 (24,56)[54]	72.1 (67,78)	86.9	6,523
Natasha Morales (L)	99.4 (99,<100)	59.9 (47,73)[55]	28.1 (23,33)	13.1	4,864
Seat of Eliahu Solomon					
Juan Pablo Ramirez (L)	0.3 (>0,1)	26.5 (15,38)	68.0 (62,74)	79.0	6,293
Steve D. White (W)	99.4 (99,<100)	69.7 (57,83)	25.2 (21,29)	11.8	4,615
Yisroel Eisenbach (W)	*	5.0 (3,7)	6.0 (5,7)	9.2	556

Notes: *Indeterminate

---

[54] 80% CI (30.1, 49.9)

[55] 80% CI (52.2, 67.6)

29

Table 3 (cont.)

East Ramapo Board of Education

Member Elections 2013-2017

Ecological Inference Results with Confidence Intervals and Homogeneous Precinct Analyses

Seat/Candidates	% Latino Voters Voting for Candidate EI	% NH Black Voters Voting for Candidate EI	% NH White Voters Voting for Candidate		Votes
			EI	HPA	
May 20, 2014					
Seat of Moshe Hopstein					
Moshe Hopstein Unopposed					2,388
Seat of David Wanounou (Daniel Schwartz)					
Harry Grossman (W) Unopposed					2,652
Seat of Yehuda Weissmandl					
Yakov Engel (W) Unopposed					2,381
Seat of Harry Grossman (MaraLuz Corado)					
Yehudat Weissmandl (W) Unopposed					2,379
May 21, 2013					
Seat of Moses Friedman					
MaraLuz Corado (L)	0.5 (>0,1)	73.9 (63,85)	69.2 (63,75)	84.9	6,806
Margaret Tuck (B)	99.6 (99,<100)	29.3 (16,42)	30.5 (24,37)	15.1	5,244
Seat of Nathan Losman					
Pierre Germain (B)	0.4 (>0,1)	91.8 (74,<100)	69.0 (64,74)	86.0	6,899
Eustache Clerveaux (B	99.5 (99,<100)	7.6 (>0,25)	30.2 (23,37)	14.0	5,085
Seat of Bernard L. Charles, Jr.					
Bernard L. Charles, Jr. (B)	0.6 (>0,1)	89.7 (76,<100)	68.7 (64,73)	85.2	6,833
Robert Forrest (B)	99.4 (99,<100)	10.6 (>0,25)	31.6 (26,37)	14.8	5,175

30

Table 4a

East Ramapo School District Voters[1]

2012 U.S. Presidential General Election

Ecological Inference Results with Confidence Intervals and Homogeneous Precinct Analyses

Seat/Candidates	% Latino Voters Voting for Candidate[2] EI	% NH Black Voters Voting for Candidate EI	HPA	% NH White Voters Voting for Candidate EI	HPA	Votes
November 6, 2012						
U.S. President						
Barack Obama (AA)	76.0 (69,83)	93.0 (91,95)	97.2	27.5 (26,29)	13.3	13,806
Mitt Romney (W)	24.1 (11,38)	6.2 (4,9)	2.6	71.3 (69,73)	86.0	10,680

---

[1] Election districts totally within East Ramapo School District boundaries.

[2] Estimates based on total of all Presidential candidates.

Notes:
95% confidence intervals in parentheses.

EI: King's Ecological Inference Analysis
HPA: Homogeneous Precinct Analysis
Example, for %NH White, polling places with ≥ 90% NH White CVAP

Table 4b

Summary of Correlation Analyses

Seat/Candidates	% Latino Voters Voting for Candidate r	p	% NH Black Voters Voting for Candidate r	p	% NH White Voters Voting for Candidate r	p
U.S. President						
Barak Obama (AA)	.49	<.001	.87	<.001	-.93	<.001
Mitt Romney (W)	-.49	<.001	-.87	<.001	.93	<.001

31